

COMPASS

1. System Description

COMPASS is a set of Government Off-The-Shelf (GOTS) and Commercial Off-The-Shelf (COTS) software services. COMPASS provides a non-intrusive middleware approach that facilitates Collaborative Planning, Modeling & Simulation (CPM&S) access as well as Distributed Collaborative Planning (DCP) to the Joint-Combined Arms environment. COMPASS allows planners using disparate mission planning systems to move between local planning, collaborative planning, analysis, and simulation-based rehearsal modes. COMPASS capabilities include a client-server architecture with session management (SMGT) tools, a shared overlay manager (SOM), a composite route preview (CRP) capability, COTS DCP tools, GOTS DCP server tools, and the ability to observe external M&S products on host C4I and mission planning systems.

COMPS (SOL, NT) <i>[GOTS]</i>	The COMPASS server segment is a set of four tightly integrated servers: Session Management (SMGT), Shared Overlay Management (SOM), Composite Route Preview (CRP), and Track/Simulation Management (TSM). Each of the COMPASS servers has a companion client library that is integrated within a modeling, planning, or simulation client application (e.g., GCCS, CTAPS, AFMSS, and ModSAF). These client libraries process remote procedure calls from the client application to their companion server in order to exchange modeling, planning, and simulation data with other client applications via the COMPASS server. COMPS also provide two applications: Server Control (for starting and monitoring COMPASS sessions) and Test Client (for developmental testing or COMPASS session monitoring).
COMPC (HP, SOL, NT) <i>[GOTS]</i>	The COMPASS client library segment is a set of four statically or dynamically linkable function libraries (SMGT, SOM, CRP, and TSM). These libraries are code-integrated within a COMPASS client application and process remote procedure calls from the client application to their companion COMPASS server in order to exchange modeling, planning, and simulation data with other COMPASS client applications.
GCPA (HP, SOL) <i>[GOTS]</i>	The GCCS Collaborative Planning Application (GCPA) is a DII COE compliant application that uses the COMPASS Client Libraries (COMPC) to exchange planning, modeling, and simulation information with other COMPASS-capable systems via the COMPASS servers (COMPS). GCPA uses the DII COE Joint Mapping Tool Kit (JMTK), the Track DataBase Manager (TDBM), and the UB communications infrastructure to interface with the underlying GCCS system. Every message received from the COMPASS servers by the GCPA is processed and represented in some way to the user of the GCPA, either on the GCPA GUI or the GCCS system chart. GCPA also has menu options to launch multimedia applications such as audio, video, chat, and whiteboard.
GCPA Patch 1 (HP, SOL) <i>[GOTS]</i>	GCPA Patch 1 modifies the GCCS Account Group segment (after installation of the CVWC segment) to enable launch of the CVWC application from the main menu.

CVWC (HP, SOL) <i>[Public Domain, licensed by Mitre] Version</i>	The Collaborative Virtual Workspace (CVW) client segment provides an intuitive method for the COMPASS user to enter and leave COMPASS sessions. CVWC automatically launches and terminates COMPASS applications to reduce workstation user workload in a distributed collaborative planning environment. See also SD, an alternate method for launching VAT and VIC/NV.
CVWC Patch 1 (HP,SOL) <i>[Public Domain, licensed by Mitre]</i>	CVWC Patch 1 modifies CVWC to enable launch and termination of GCPA and RWC as COMPASS sessions are entered or left by the workstation user. Unpatched CVWC launches and terminates only VAT and VIC.
CVWS (SOL) <i>[Public Domain, licensed by Mitre] Version</i>	The Collaborative Virtual Workspace (CVW) server segment provides a central administrative facility for setting up virtual conference centers and their subordinate sessions. Virtual conference centers and their sessions are accessed by CVWC.
RWS (SOL, NT) <i>[COTS, licensed by VisualTek Solutions, Inc]</i>	The Rendezvous Whiteboard server segment is the server component of an Internet/Intranet Whiteboard. RWS allows simultaneous text sessions, drawing on a shared canvas, file and document sharing, and screen and image sharing and annotation. Rendezvous provides server "channels," allowing large workgroups to share information simultaneously. Rendezvous implements GroupWare technologies such as shared whiteboards, shared documents, text communication rooms, collective browsing in a consistent work environment. Rendezvous is compatible with TCP/IP based networks.
RWC (HP, SOL, NT) <i>[COTS, licensed by VisualTek Solutions, Inc]</i>	The Rendezvous Whiteboard client segment is the client component of an Internet/Intranet Whiteboard. See RWS for additional details.
SD (HP, SOL, NT) <i>[Public Domain, no licensing]</i>	Session Directory is a multicast backbone (MBONE) application that provides (1) an easy way to create multicast sessions, (2) a facility to advertise new session(s) and (3) a dynamically updated list of available sessions (e.g., VAT audio conferences, and NV or VIC videoconferences). SD is used in COMPASS 98 as an alternate method for setting up and launching audio (VAT) and videoconferences (VIC/NV).
VAT (HP, SOL, NT) <i>[Public Domain, no licensing]</i>	Visual Audio Tool allows users to conduct host-to-host or multihost audio teleconferences over an Internet (multihost conferences require that the kernel support IP multicast). On most architectures, no hardware other than a microphone is required - sound I/O is via the built-in audio hardware.
VIC (HP, SOL, NT) <i>[Public Domain, no licensing]</i>	Primary video conferencing application for COMPASS 98. Video Conferencing (VIC) was designed with a flexible and extensible architecture to support heterogeneous environments and configurations. For example, in high bandwidth settings, multi-megabit full-motion JPEG streams can be sourced using hardware assisted compression, while over lower bandwidth environments like the Internet, aggressive low bit-rate coding can be carried out in software. VIC is based on version 2 of the Real-time Transport Protocol (RTP), which provides basic real-time media communication

	support. RTP is an application-level protocol and is implemented entirely within VIC -- no special system enhancements needed to run RTP. Although VIC can be run point-to-point using standard unicast IP addresses, it is primarily intended as a multiparty conferencing application.
NV (<i>Sun</i>) [Public Domain, no licensing]	Alternate video conferencing application for COMPASS 98. Network Video allows users to transmit and receive slow frame rate video via UDP/IP across an Internet. Video streams can be either sent point to point, or sent to several destinations simultaneously using IP multicast. Receivers need no special hardware – just an X display. Transmitters need some sort of frame capture hardware (e.g., Sun Video Card part number X1085A)
NVAT (<i>NT</i>) [Public Domain, no licensing]	Alternate video conferencing application for COMPASS 98. Network Video Audio Tool (NVAT) is an audio/video application for Windows 95 and Windows NT, compatible with NV and VAT. Uses RTPv1.

2. System Requirements

COMPASS has Solaris, HP and NT segments. Its additional hardware requirements are as follows:

Video Card (e.g., Sun Part # X1085A) for video transmission using Video Conferencing (VIC) [not required for video reception]

NTSC Video Camera for video transmission using Video Conferencing (VIC) [not required for video reception]

Microphone for audio transmission using Visual Audio Tool (VAT)

3. Users/Training

Collaborative planners use the COMPASS application.